



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-1154; Project Identifier MCAI-2022-00550-T]**

**RIN 2120-AA64**

### **Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for all MHI RJ Aviation ULC Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This proposed AD was prompted by a report that the pressure switch gauge assembly for the cargo bay fire extinguisher container has the potential to display an incorrect pressure under certain environmental conditions. This proposed AD would require replacing affected high rate of discharge (HRD) and low rate of discharge (LRD) pressure switch gauge assemblies for the cargo bay fire extinguisher container. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email [thd.crj@mhirj.com](mailto:thd.crj@mhirj.com); Internet [mhirj.com](http://mhirj.com). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-1154; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Gabriel Kim, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

## **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-1154; Project Identifier MCAI-2022-00550-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

## **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Gabriel Kim, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov. Any commentary that the

FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2022-20, dated April 19, 2022 (TCCA AD CF-2022-20) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all MHI RJ Aviation ULC Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2C11 (Regional Jet Series 550) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-1154.

This proposed AD was prompted by a report that the pressure switch gauge assembly for the cargo bay fire extinguisher container has the potential to display an incorrect pressure under certain environmental conditions. The supplier attributed the root cause of the container pressure display error to the use of a room temperature vulcanizing (RTV) silicone. Both the HRD and LRD cargo bay fire extinguisher containers are affected. The airplane is intended to be operated at temperatures as low as -53.8 °C (-65 °F). However, testing has shown that at temperatures below -49.4 °C (-57 °F), the RTV silicone goes through a glass transition that causes locking of the discharge indication microswitch in a closed state (showing normal pressure) on 50% of the assemblies tested. After returning to above -35.0 °C (-31.5 °F) for more than 6 minutes, the pressure switch gauge assembly returns to normal operation. The FAA is proposing this AD to address instances where the fire extinguisher container capacity is reduced below the level required to appropriately suppress a cargo fire and the flightcrew does not

receive an indication of low pressure, which, in the event of a fire in the cargo bay, could lead to an uncontrollable fire and loss of the airplane. See the MCAI for additional background information.

### **Related Service Information Under 1 CFR Part 51**

MHI RJ Aviation ULC has issued Service Bulletin 670BA-26-013, dated October 8, 2021. This service information describes procedures for replacing the HRD and LRD pressure switch gauge assemblies for the cargo bay fire extinguisher containers having part number (P/N) 473919-1, P/N 473920-1 and P/N 474901-1, manufactured prior to March 2020 as indicated on the identification plate, with a serviceable part number.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA's Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Proposed AD Requirements in this NPRM**

This proposed AD would require accomplishing the actions specified in the service information already described.

## Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 564 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

### Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
4 work-hours X \$85 per hour = \$340	\$595	\$935	\$527,340

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a

substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

#### **MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):**

Docket No. FAA-2022-1154; Project Identifier MCAI-2022-00550-T.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all MHI RJ Aviation ULC Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2C11 (Regional Jet Series 550) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes; certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 26, Fire protection.

**(e) Unsafe Condition**

This AD was prompted by a report that the pressure switch gauge assembly for the cargo bay fire extinguisher container has the potential to display an incorrect pressure under certain environmental conditions. The FAA is issuing this AD to address instances where the fire extinguisher container capacity is reduced below the level required to appropriately suppress a cargo fire and the flightcrew does not receive an indication of low pressure, which, in the event of a fire in the cargo bay, could lead to an uncontrollable fire and loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Replacement**

Within 10 years after the effective date of this AD: Replace the high rate of discharge and low rate of discharge pressure switch gauge assemblies for any cargo bay fire extinguisher container having part number (P/N) 473919-1, P/N 473920-1, and P/N 474901-1, manufactured prior to March 2020 as indicated on the identification plate, with a serviceable part number, in accordance with the Accomplishment Instructions of MHI RJ Aviation ULC Service Bulletin 670BA-26-013, dated October 8, 2021.



#### **(h) Parts Installation Prohibition**

As of 10 years after the effective date of this AD, or before further flight after the replacement has been done in paragraph (g) of this AD, whichever occurs first, no person may install, on any airplane, a cargo bay fire extinguisher container having P/N 473919-1, P/N 473920-1, or P/N 474901-1, manufactured prior to March 2020 as indicated on the identification plate, unless “CW SB Fire Extinguisher-26-1” is identified on the identification plate.

#### **(i) No Return of Part Requirement**

The Accomplishment Instructions of MHI RJ Aviation ULC Service Bulletin 670BA-26-013, dated October 8, 2021, specify to return the cargo fire extinguisher containers to the manufacturer, this AD does not include that requirement.

#### **(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC’s TCCA Design Approval Organization

(DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Transport Canada Civil Aviation AD CF-2022-20, dated April 19, 2022, for related information. This MCAI may be found in the AD docket on the Internet at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-1154.

(2) For more information about this AD, contact Gabriel Kim, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

(3) For service information identified in this AD, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email [thd.crj@mhirj.com](mailto:thd.crj@mhirj.com); Internet [mhirj.com](http://mhirj.com). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on September 2, 2022.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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